THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

- 1. A coating agent for the coating of paper surfaces, in particular for paper to be aluminized, comprising an aqueous polymer dispersion, characterized in that it comprises dispersed in aqueous phase a mixture of polymer particles having an average particle size of 0.2 to 5  $\mu$ , preferably 0.3 to 2  $\mu$ , and particles having an average particle size of smaller than 0.1  $\mu$ m, preferably smaller than 0.07.
- 2. The coating agent according to claim 1 characterized in that the mixing ratio of coarser polymer particles to the finer particles is in the range of 1:1 to 9:1, preferably in the range of 1.5:1 to 3:1.
- 3. The coating agent according to claim 1 or 2 characterized in that it comprises different dispersing agents for the two polymer components with a different surface tension.
- 4. The coating agent according to claim 1 to 3 characterized in that the coating agent comprises thickeners, preferably based on cellulose.
- 5. The coating agent according to claim 1 to 4 characterized in that it comprises pigments with a physical barrier action, preferably plate-like pigments based on mica, layered silicates, and/or clay.
- 6. The coating agent according to any one of claims 1 to 5 characterized in that at least one component is dyed with a water-soluble colorant.

- 7. The coating agent according to any one of claims 1 to 6 characterized in that it comprises a surface-active additive, preferably silicone oil, a fluorinated tenside and/or a smoothing agent, preferably wax or aluminum stearate.
- 8. The coating agent according to any one of claims 1 to 7 characterized in that the softening range of one polymer component is reduced by an additive, preferably of ethylene/vinyl-acetate co-polymers, to such an extent that the coating is heat sealable.
- 9. The coating agent according to any one of claims 1 to 8 characterized by a solids content of 20 to 50%, relative to the polymer content.